

# Work Order ID 80014

Wednesday, February 08, 2012 3:53:51 PM

**\*80014\***

Page 1

Item ID: D4004-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Side Restraint Angle  
 Start Date: 2/9/2012 Start Qty: ~~4.00~~ **\*4\*** Cust Item ID:  
 Required Date: 2/28/2012 Req'd Qty: 4.00 **\*4\*** Customer:  
 Reference:

Approvals: Process Plan: MF Date: 12-02-12 Tooling: Date: Run Start **\*NR1\***  
 QC: Date: SPC (Y/N): Date: Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D4004	A

100 0.00

**\*100\***

Waterjet

FLOW CNC Waterjet

2024.063

Memo

1-Cut as per Dwg (D4004-1F)

Dwg Rev: A

Prog Rev: A

2-Deburr if necessary

0.00

B12-2-10



110

QC2- Inspect parts off machine FAI/FAIB

0.00

**\*110\***

QC

Quality Control

Memo

0.00

B12-2-10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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Item ID: D4004-041

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Item Name: Side Restraint Angle

Stop \*NS2\*

Start Date: 2/9/2012 Start Qty: 4.00

\*4\*

Cust Item ID:

Required Date: 2/28/2012 Req'd Qty: 4.00

\*4\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

QC8- Inspect parts - second check

0.00

\*120\*

QC

Memo

0.00

Quality Control

130

Bend as per dwg

0.00

\*130\*

Brake NC

Memo

0.00

Brake NC

1- Bend D4004-1 as per Dwg  
2- C'sink as per dwg

140

QC5- Inspect part completeness to step on W/O

0.00

\*140\*

QC

Memo

0.00

Quality Control

SB 12/02/10

SB 12/02/13

SB 12/02/14

(10)

(10)

(10x)

(10)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 80014

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Item ID: D4004-041 Accept \*N900040100\* Setup Start \*NS1\*  
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 Item Name: Side Restraint Angle  
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 Required Date: 2/28/2012 Req'd Qty: 4.00 \*4\* Customer:  
 Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start \*NR1\*  
 QC: Date: SPC (Y/N): Date: Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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150 Chemical Conversion Coat per QSI005 4.1 0.00

\*150\*

HandFinish

Hand Finishing

Memo

0.00

10 12-2-14

160 Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3 0.00

\*160\*

Powdercoat

Powder Coating

Memo

Start Time:

Oven Temperature:

Finish Time:

2:00 of 0.00  
 320  
 2:30

10 X 12/02/15

170 QC3- Inspect Part Finish 0.00

\*170\*

QC

Quality Control

Memo

0.00

10 X 12/02/15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 80014

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Wednesday, February 08, 2012 3:53:51 PM

Item ID: D4004-041

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Side Restraint Angle

Start Date: 2/9/2012 Start Qty: 4.00 \*4\*

Cust Item ID:

Required Date: 2/28/2012 Req'd Qty: 4.00 \*4\*

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180		0.00							
*180*									
Small Fab	Memo	0.00							
Small Fab	Assemble as per dwg								
190	QC5- Inspect part completeness to step on W/O	0.00							
*190*									
QC	Memo	0.00							
Quality Control									
200	Identify as per dwg & Stock Location: <u>141</u>	0.00							
*200*									
Packaging	Memo	0.00							
Packaging									

*SB 12/02/21* (10)

*SB 12/02/23*

(10)

*12/2/23* (10)

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



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Item ID: D4004-041 Accept \*N900040100\* Setup Start \*NS1\*  
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 Item Name: Side Restraint Angle  
 Start Date: 2/9/2012 Start Qty: 4.00 \*4\* Cust Item ID:  
 Required Date: 2/28/2012 Req'd Qty: 4.00 \*4\* Customer:  
 Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start \*NR1\*  
 QC: Date: SPC (Y/N): Date: Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	QC21- Final Inspection - Work Order Release	0.00							
*210*									
QC	Memo	0.00							
Quality Control									

Handwritten notes: M.L. 5 12/02/23

Handwritten signature: R12-0223  
 (10)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Wednesday, February 08, 2012 3:53:51 P

Page 1

Work Order ID: 80014

Parent Item: D4004-041

Parent Item Name: Side Restraint Angle

Start Date: 2/9/2012

Required Date: 2/28/2012

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP rev A 09.12.15 new issue Prelim EC verified by:DD IPP Rev:B 10.05.17 as per ECN10-562 DD verf:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.063 2024-T3 .063 sheet		Purchased	No			100	sf	211.5000	0.22	0.9263158			
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				MAT022		211.5							
				117392		19.5				117392			
				119916		192							
D4004-3 Strut Lock Bracket		Manufactured	No			180	Each	0.0000	1	4			
						B80021			(10x)				
D4004-7 Hose Clip		Manufactured	No			180	Each	5.0000	1	4			
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				GA		5							
				72662		5				4			
MS20426AD4-4 Rivet		Purchased	No			180	Each	1,365.0000	1	4			
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				ST317		1365							
				116188		1365				10			
MS20426AD4-5 Rivet		Purchased	No			180	Each	5,102.0000	2	8			
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				Mezz		35							
				6733		35							
				ST317		5067							
				6874		5067				20			

(10)  
B12-2-10  
B12/02/21  
B12/02/21  
B79992  
B12/02/21  
B12/02/21

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

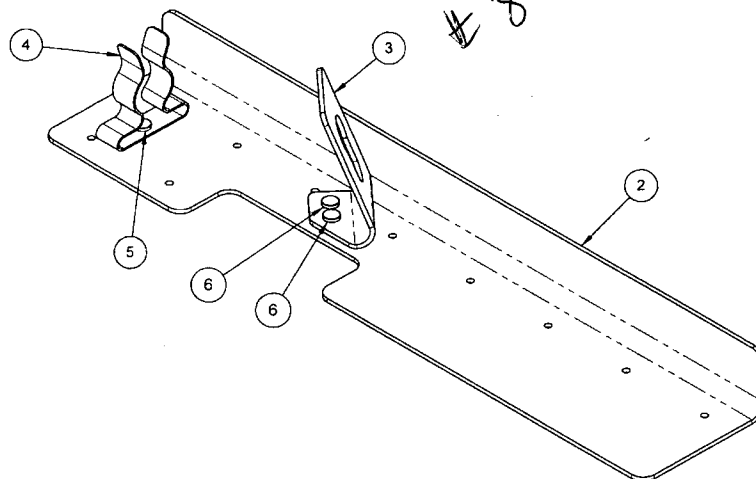
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

ITEM NO.	QTY. -041	PART NUMBER	DESCRIPTION	JOHN CAMERON AVIATION PART NUMBER
1	X	D4004-041	SIDE RESTRAINT ANGLE	JCA-M47-2-19
2	1	D4004-1	SIDE RESTRAINT	
3	1	D4004-3	STRUT LOCK BRACKET	
4	1	D4004-7	HOSE CLIP	
5	1	MS20426AD4-4	RIVET	
6	2	MS20426AD4-5	RIVET	



D4004-041 SIDE RESTRAINT ANGLE

**RELEASED**  
R 2010-05-05  
MP

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT "GREY SANTEX" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4004-041" AND B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.21 lbs

A	NEW ISSUE	BY	10.02.10
REV	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.02.10		

<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. <b>D4004</b>	REV. A
TITLE <b>SIDE RESTRAINT</b>	SCALE NTS
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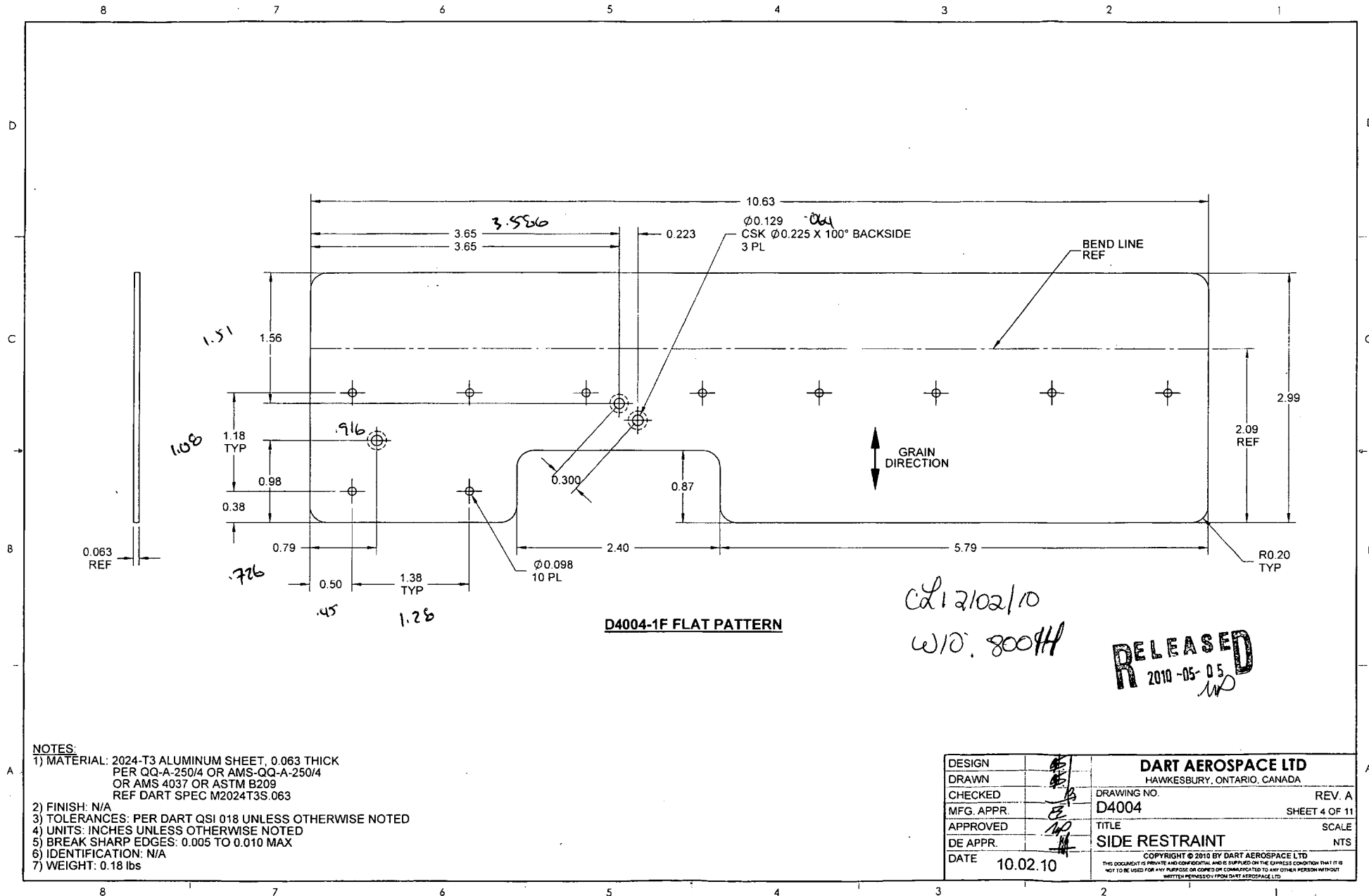
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	80014
<b>Description:</b> Side Restraint		<b>Part Number:</b>	D4004-1
<b>Inspection Dwg:</b> D4004 <b>Rev:</b> A		<b>Page 1 of 1</b>	

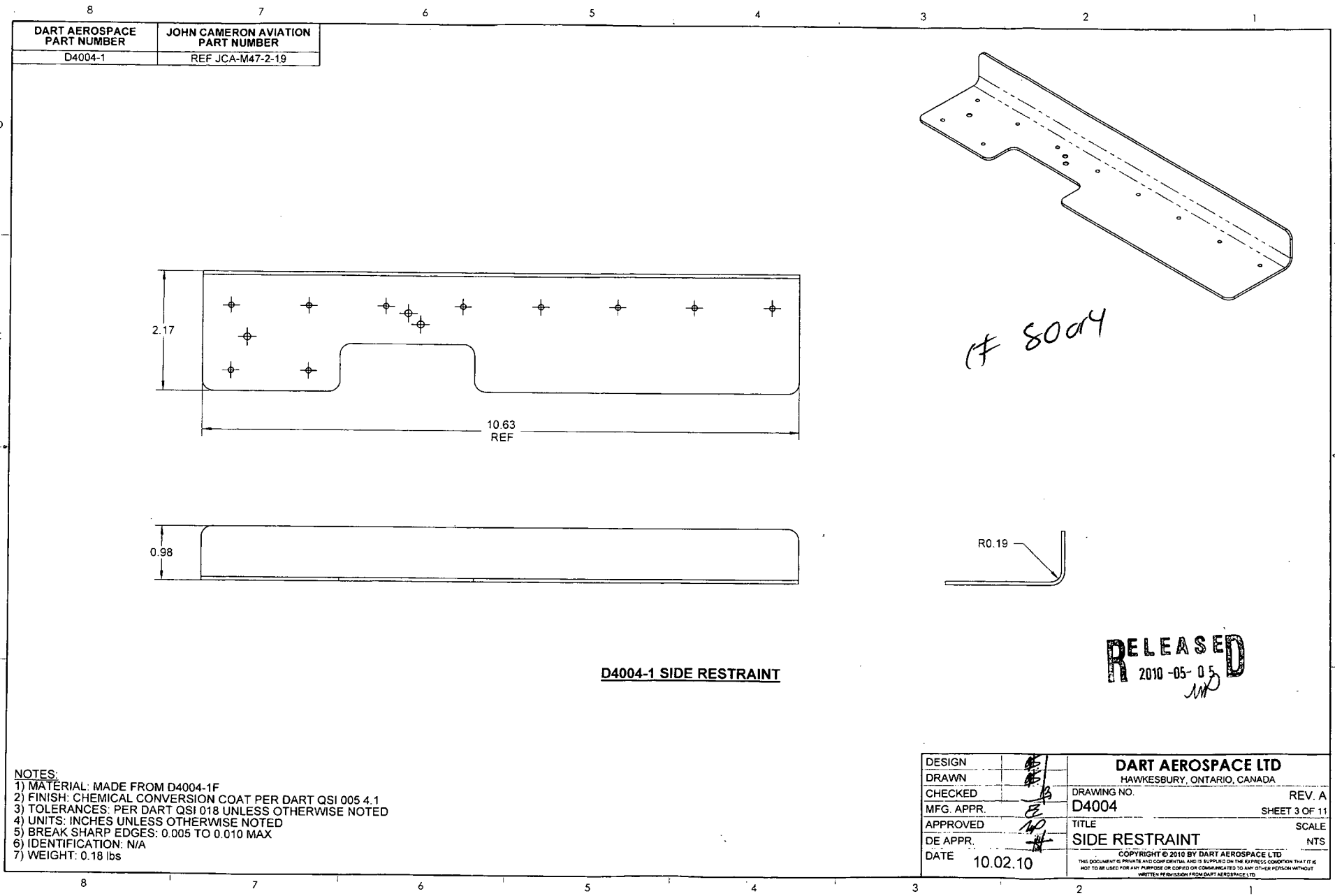
### FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.098	+0.004/-0.001	.099	2		V RB02	
Ø0.129	+0.005/-0.001	.130	2		V	
3.65	+/-0.030	3.654	1		V	
0.223	+/-0.010	.224	2		V	
10.63	+/-0.030	10.641	2		PROW302	
2.99	+/-0.030	2.995	2		V	
5.79	+/-0.030	5.796	2		V	
0.87	+/-0.030	.865	2		V	
2.40	+/-0.030	2.401	2		✓	
1.38	+/-0.030	1.377	2		V	
0.50	+/-0.030	.505	2		V	
0.79	+/-0.030	.794	2		V	
0.38	+/-0.030	.377	2		V	
0.98	+/-0.030	.984	2		V	
1.18	+/-0.030	1.184	2		V	
1.56	+/-0.030	1.564	2		V	
0.063	+/-0.010	.063	2		V	

<b>Measured by:</b>	RB	<b>Audited by:</b>	S	<b>Preliminary Approval:</b>	N/A
<b>Date:</b>	12-2-16	<b>Date:</b>	12/02/10	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	10.08.03	New Issue      P/O D4004-041	KJ	AK





- NOTES:
- 1) MATERIAL: MADE FROM D4004-1F
  - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.18 lbs

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4004	SHEET 3 OF 11
APPROVED		TITLE	SCALE
DE APPR.		SIDE RESTRAINT	NTS
DATE	10.02.10	COPYRIGHT © 2010 BY DART AEROSPACE LTD	
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